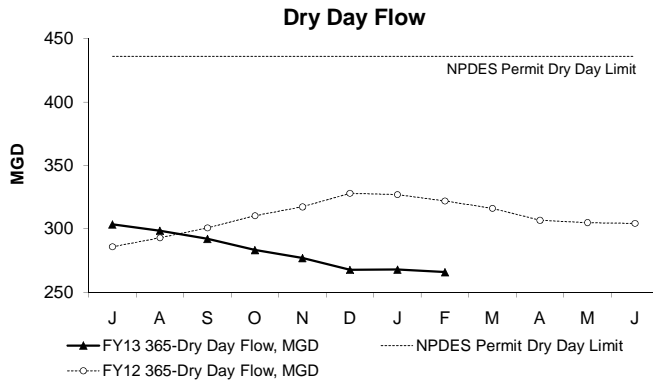


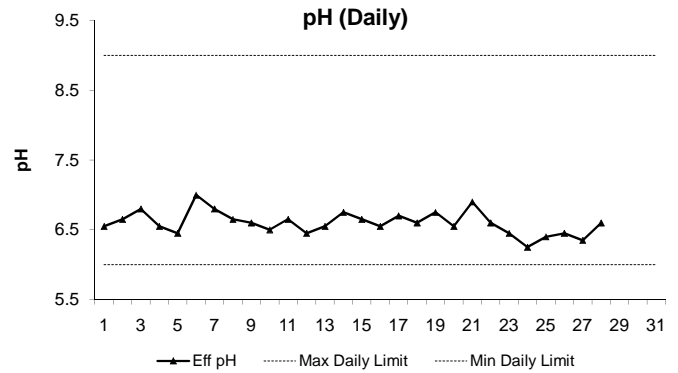
Massachusetts Water Resources Authority

Deer Island Treatment Plant Performance

February 2013

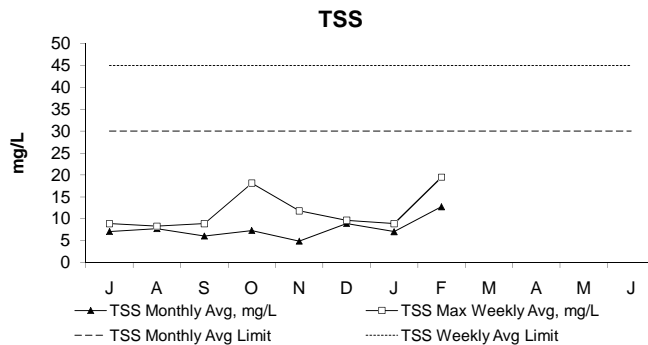


February's Dry Day Flow is the average of all dry weather influent flows over the previous 365 days from 3/1/2012 to 2/28/2013. The Dry Day Flow for February was 265.8 MGD, well below the permit limit of 436 MGD, and is the lowest 365-Dry Day Flow in the history of the new NPDES Permit (1999). The previous 365-Dry Day Flow record of 267.7 MGD was recently set in December 2012.



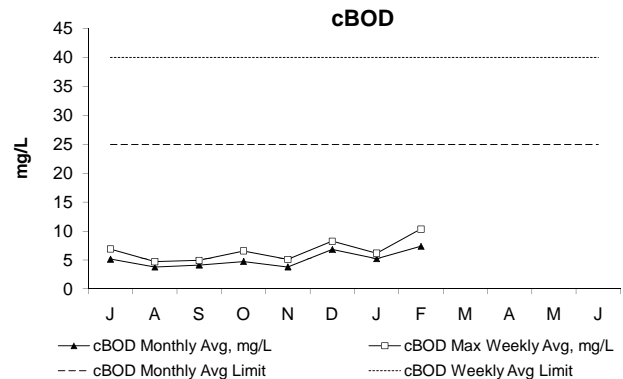
In February, all pH measurements were fairly typical for the season and within permit limits.

pH is a measure of the acidity or basicity of the effluent. Small fluctuations in pH do not have an adverse effect on marine environments. Because pure oxygen is used in the activated sludge reactors, the effluent pH tends to be at the lower range.



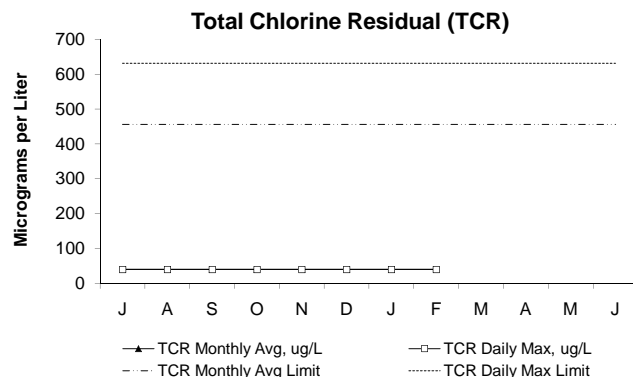
In February, both the weekly and monthly concentrations of TSS were below permit limits and within the expected ranges for the season. Both the Monthly and the Max Weekly Avg TSS concentrations were slightly elevated this month due mainly to the higher effluent TSS values in the last few days of the month that were a result of high plant flows caused by several significant rain events combined with snowmelt.

TSS, or Total Suspended Solids in the effluent, is a measure of the amount of solids that remain suspended after treatment.



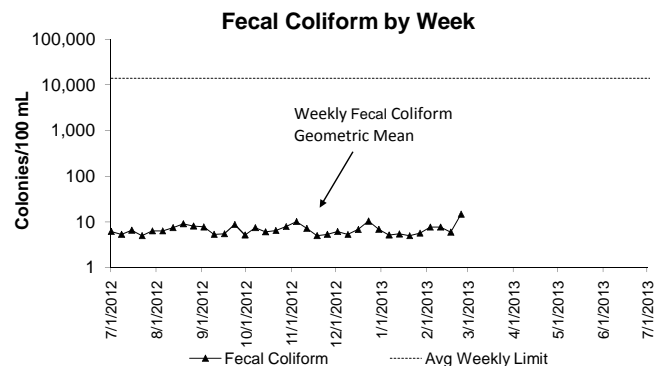
In February, both the weekly and monthly concentrations of cBOD were well below permit limits. Both the Monthly and the Max Weekly Avg cBOD concentrations were slightly elevated this month due mainly to the higher effluent cBOD values in the last few days of the month that were a result of high plant flows caused by several significant rain events combined with snowmelt.

cBOD, or Carbonaceous Biochemical Oxygen Demand, is a measure of the amount of dissolved oxygen required for the decomposition of organic materials in the environment.



In February, both the maximum daily and monthly concentrations of TCR were below permit limits. Note: Both the TCR Monthly Avg and the TCR Daily Max values have been non-detectable at 40 ug/L for each month of FY13. Therefore, both parameters are represented by the same trendline in the above graph.

TCR, or Total Chlorine Residual in the effluent, is a measure of the amount of chlorine that remains after the disinfection/dechlorination process. If the chlorine residual in the effluent is too high, it may threaten marine organisms.



In February, all permit conditions for Fecal Coliform were met. Fecal Coliform is an indicator of the presence of pathogens. The levels of these bacteria after disinfection show how effectively the plant is inactivating many forms of disease-causing microorganisms.

There are four conditions in the permit that must be met: daily geomean; weekly geomean; 10% of all samples; and greater than three consecutive samples not to exceed 14,000 col/100mL.